

## ABSTRACT

[00116] Routing protocols and algorithms, referred to collectively as "Link State Path Vector" (LSPV) techniques, are described. The LSPV allows the application of link-state techniques, such as flooding, to path vector protocols. Routing peers may be organized to form multiple levels of hierarchy. The LSPV mechanisms enable these peers to (1) exchange routing information via virtual links and (2) calculate the best network routes in light of the routing information. Routes may be selected on the basis of both topological distance and network policy. Such metrics may be determined by combining otherwise orthogonal metrics for IGPs and EGPs.